

Appl. No. 09/871,268
Response dated: Nov. 16, 2006
Reply or Office Action of Sep. 1, 2006

Patent
Docket No. 2030.42

Listing of Claims

Claim 1 (currently amended) A method for transmitting two related channels of signals through the air, the method comprising:

modulating a first channel of signals with a first carrier frequency;

amplifying the first carrier frequency modulated with the first channel of signals;

modulating a second channel of signals with a second carrier frequency;

amplifying the second carrier frequency modulated with the second channel of signals;

combining the amplified and modulated first channel of signals and the second channel of signals through a high isolation combiner;

coupling the combined signals from the high isolation combiner to a single antenna output;

transmitting the combined signals to a receiver system; and

regenerating the first channel and the second channel of signals in the receiver system by separating one ~~on~~ from the other.

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Claim 2 (presently amended) A dual carrier wireless transmitter apparatus, comprising:

a first voltage controlled oscillator, having a first base band signal coupled to deviate a first oscillator frequency, thereby outputting a first modulated carrier signal;

a second voltage controlled oscillator, having a second base band signal coupled to deviate a ~~said~~ second oscillator frequency, thereby outputting a second modulated carrier signal; ~~and~~

a high isolation combiner coupled to combine said first modulated carrier signal and said second modulated carrier signal to a single antenna output;

a first amplifier coupled to amplify said first modulated carrier signal before input to said high isolation combiner, and

a second amplifier coupled to amplify said second modulated carrier signal before input to said high isolation combiner.

Claim 3 (canceled).

Claim 4 (previously presented) The apparatus of claim 2 wherein said first voltage controlled oscillator further comprises a dielectric resonator oscillator.

Claim 5 (canceled).

Claim 6 (canceled).

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Claim 7 (previously presented) A dual carrier wireless transmitter apparatus, comprising:

a first voltage controlled oscillator, having a first base band signal coupled to deviate a first oscillator frequency, thereby outputting a first modulated carrier signal, wherein said first base band signal deviates said first oscillator frequency by about 150 kilohertz;

a second voltage controlled oscillator, having a second base band signal coupled to deviate a second oscillator frequency, thereby outputting a second modulated carrier signal, and

a high isolation combiner coupled to combine said first modulated carrier signal and said second modulated carrier signal to a single antenna output.

Claim 8 (canceled).

Claim 9 (previously presented) The apparatus of claim 2 wherein said first base band signal comprises analog audio signals.

Claim 10 (previously presented) The apparatus of claim 9 wherein said analog audio signals comprise frequency components in the range of 50 Hz to 20 kHz.

Claim 11 (canceled).

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Claim 12 (previously presented) A wireless receiver apparatus for demodulating a radio frequency signal, having a first modulated carrier signal and a second modulated carrier signal, into a first base band signal and a second base band signal, comprising:

- a first mixer coupled to down-convert the radio frequency signal to a first intermediate frequency signal;

- a first filter coupled to filter said first intermediate frequency signal, said first filter having a pass band of sufficient width to pass both of the down-converted first and second modulated carrier signals;

- a second mixer coupled to down-convert said filtered first intermediate frequency signal to a second intermediate frequency signal;

- a second filter coupled to filter said second intermediate frequency signal, said second filter having a pass band of such center frequency and width as to pass only the down-converted first modulated carrier signal, and

- a third filter coupled to filter said second intermediate frequency signal, and having a pass band of such center frequency and width as to pass only the down-converted second modulated carrier signal.

Claim 13 (previously presented) The apparatus of claim 12 further comprising:

- a first demodulator coupled to demodulate the filtered and down-converted first modulated carrier signal, and

- a second demodulator coupled to demodulate the filtered and down-converted second modulated carrier signal.

Claim 14 (previously presented) The apparatus of claim 12 wherein said first mixer is coupled to a first local oscillator.

Claim 15 (previously presented) The apparatus of claim 12 wherein said second mixer is coupled to a second local oscillator.

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Claim 16 (canceled).

Claim 17 (previously presented) The apparatus of claim 12 wherein said second filter has a pass band of sufficient width to pass a frequency modulated signal that is deviated about 150 kilohertz.

Claim 18 (canceled).

Claim 19 (previously presented) The apparatus of claim 12 wherein the first base band signal comprises analog audio signals.

Claim 20 (previously presented) The apparatus of claim 19 wherein the analog audio signals comprise frequency components in the range of 50 Hz to 20 kHz.

Claim 21 (canceled).

Claim 22 (canceled).

Claim 23 (canceled).

Claim 24 (canceled).

Claim 25 (canceled).

Claim 26 (canceled).

Claim 27 (canceled).

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Claim 28 (canceled).

Claim 29 (canceled).

Claim 30 (canceled).

Claim 31 (canceled).

Claim 32 (previously presented) A method of receiving and demodulating a radio frequency signal, having a first modulated carrier signal and a second modulated carrier signal, into a first base band signal and a second base band signal, comprising the steps of:

down-converting the radio frequency signal to a first intermediate frequency signal;

filtering said first intermediate frequency signal through a pass band of sufficient width to pass both of the down-converted first and second modulated carrier signals;

down-converting said filtered first intermediate frequency signal to a second intermediate frequency signal;

filtering said second intermediate frequency signal through a pass band of such center frequency and width as to pass only the down-converted first modulated carrier signal, and demodulating the first base band signal therefrom, and

filtering said second intermediate frequency signal through a pass band of such center frequency and width as to pass only the down-converted second modulated carrier signal, and demodulating the second base band signal therefrom.

Claim 33 (canceled).

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Claim 34 (previously presented) The method of claim 32 wherein said filtering said second intermediate frequency signal steps employ a pass band of sufficient width to pass a frequency modulated signal that is deviated about 150 kilohertz.

Claim 35 (canceled).

Claim 36 (previously presented) The method of claim 32 wherein the first base band signal comprises analog audio signals.

Claim 37 (previously presented) The method of claim 36 wherein the analog audio signals comprise frequency components in the range of 50 Hz to 20 kHz.

Claim 38 (canceled).